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OPERATIONAL MANEUVER FROM THE SEA - A CRITICAL VULNERABILITY

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Weaknesses, perhaps even critical vulnerabilities, exist in the OMFTS concept. Shortfalls are in coalition and joint operations, force protection, and support requirements. Because U.S. amphibious force capabilities are already years ahead of our allies, OMFTS could damage the unity of effort within a coalition. With enlarged battlespace and increased information flow, the operational commander may become overwhelmed. OMFTS seeks to exploit vulnerabilities as they arise and allows the scheme to change after launching forces. This complicates coordination with supporting commanders, air control, and naval gunfire.

The assault vehicles are perhaps a critical vulnerability. The unarmored LCAC is recognized as susceptible. The AAAV is well armored, but is vulnerable in an OTH transit. Coastal patrol boats could attack AAAVs while at sea. Mines also pose a barrier to the operational commander; they remain an obstacle to achieving battlespace dominance with no effective solution in sight. Sea-based logistics is best suited to small engagements. Anything larger would stress the ship's capability and not meet the Marine's needs.

We cannot further develop the OMFTS concept until the true operating characteristics of the MV-22 and the AAAV are known; which will only be when they reach in the fleet.

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INTRODUCTION

The end of the Cold War led to the beginning of an uncertain peace. As the relatively stable bipolar power structure crumbled, regional powers began to emerge. The validity of old alliances was questioned and new ones were contemplated. Literally overnight, the world forever changed, and the policies and national and military strategies of every major country had to change also.

In the United States, the debates over peace dividends and military downsizing began. The military, especially the Naval service, had to refocus its mission. The vast and capable blue water fleet no longer had challengers on the high seas. In that sense, DESERT SHIELD/DESERT STORM could not have happened at a better time. Saddam Hussein's antics revealed two things clearly: America still needs a strong military, and the new threat will come from regional powers. The regional dangers were always there; however, they had been less prominent during the Cold War.

The new direction for the Naval service was promulgated in the 1992 white paper " . . . From the Sea." That shifted the focus from the open ocean to expeditionary operations in the littorals.[1] Two years later the Navy department published "Forward . . . From the Sea," which expanded and amplified the contributions of naval expeditionary forces from peacetime through regional conflicts.[2] The unprecedented emphasis on littoral warfare and naval expeditionary forces focused attention on our amphibious capabilities, which were largely ignored during the Cold War. This, coupled with the need for a vision for the Twenty-first Century, led to the Marine Corps concept paper, "Operational Maneuver From the Sea" (OMFTS).

The Commandant considers the Marine Corps to be at a strategic

crossroads, much like they were earlier this century.[3] Then, Marine Captain "Pete" Ellis saw the need for a way to project power in the Pacific region. In 1921 he published a controversial document outlining his ideas. After twenty years of debate and experimentation, with the amphibious assault concept, the Marines were ready for World War II. OMFTS, similarly, was presented as a future capability to be debated and explored today.

Admittedly, the details of the concept are not known.[4] So far, most of the debate has had a Marine Corps leaning. The basic premise is sound, but there are some deficiencies. This paper, written from the blue side of the blue/green team, will explore the areas of Coalition and Joint operations, force protection, and support requirements at the operational and operation-tactical level that could be weaknesses, perhaps even critical vulnerabilities, in the OMFTS concept.

OPERATIONAL MANEUVER FROM THE SEA

What is it?

OMFTS is simply "A concept for the projection of Naval power ashore." Gone are the multiple waves of landing craft assaulting numbered and colored beaches. Instead, the maneuver of ships at sea and the maneuver of Marines ashore form a continuum that is planned and executed as a single event.[5] It is distinct from other forms of operational maneuver in that it uses the sea for friendly maneuver while it serves as a barrier to the enemy, thus allowing friendly forces to avoid disadvantageous situations.[6]

Imbedded in the OMFTS concept is the idea of "Ship-to-Objective-Maneuver," in which the landing forces move directly from the ships to

their objectives, bypassing the initial, lengthy build-up of forces ashore.[7] By maneuvering over the horizon (OTH) at sea, a smaller, more lethal force can choose to strike at their objective in a manner that exploits an enemy weakness. This method gives the commander greater flexibility in controlling the operational tempo, agility, and momentum. Ideally, the strike will be at the enemy's center of gravity, which could give it strategic significance.[8]

OMFTS relies on new and developing technology to strike from over the horizon. The Landing Craft Air Cushion (LCAC) is currently in the fleet and has successfully operated at extended ranges. Under development are the MV-22 OSPREY and the Advanced Amphibious Assault Vehicle (AAAV); they are scheduled to enter the fleet after the turn of the century. Both will provide greater maneuvering capability at sea and ashore.

Why is it needed?

> "Our forcible entry capability is nonexistent. . . . *Assault* is a function of mass. We can't produce it, shy of nuclear explosions or following a long buildup ashore as in DESERT SHIELD/DESERT STORM."[9]
>
> - Col Gordon D. Batcheller, USMC(ret)

One can hardly argue with Col Batcheller's remarks with our modern "rightsized," do-more-with-less Naval service. Assaults, however, are no longer conducted as they were in World War II or Inchon; that capability was lost long ago. "The 'come to stay' assault has become obsolete, for the most part, and is in any case not executable because of the mine threat and a lack of STS (ship to shore) assets."[10] Besides, the classic frontal beach assault was known for high casualties. Today, the American public is unlikely to tolerate high casualties in an MOOTW or limited aims operation,

which make up the majority of modern military operations.

The OMFTS concept is an attempt to focus technology and doctrine for an uncertain future. Our smaller forces need to work efficiently and decisively to combat our undetermined, yet increasingly competent, foes of tomorrow. With the proliferation of mines, anti-ship cruise missiles, and cheap precision munitions, our opponents will have the ability to target our vulnerabilities and disrupt or even stop an operation.[11]

OMFTS is a framework for future naval operations to battle the "chaos in the littorals."[12] The United States will require a credible power projection capability in the future. OMFTS is intended for use across the spectrum from peacetime presence, to low and high intensity MOOTW, to regional conflict.

For OMFTS to become an operational reality, it must work not only within the Naval service, but also in the Joint and Combined world. Joint operations, without question, are here to stay. And, as the world becomes more interdependent, it is possible, but increasingly unlikely, the U.S. will conduct unilateral military operations. Compatibility with Joint and Combined operations is a significant litmus test for the OMFTS concept.

OMFTS AND COALITION FORCES

Today, and in the foreseeable future, our military is without equal. U.S. forces could do any mission required as a stand alone force. Nevertheless, no matter how desirable or practical a U.S. only operation would be, it might not be politically acceptable. DESERT SHIELD/DESERT STORM is an excellent example of the importance of a Coalition. U.S.

amphibious forces are already years ahead of our allies in terms of capabilities.[13] A Naval force that employs OMFTS will operate at a level our allies will probably never reach.

The reason for this separation is primarily economic. Most countries do not have the defense budget to purchase, operate and maintain OTH capable landing craft or the ships they operate from. In fact, most countries do not have the defense budget to maintain a credible amphibious assault capability. This reality led to the Combined Amphibious Forces, Mediterranean (CAFMED), concept. Several European countries combined their amphibious forces to form an amphibious task force. This task force operates together and with the U.S. regularly and provides those countries with an amphibious assault capability.

U.S. amphibious doctrine and tactics are significantly advanced when compared to CAFMED's. Their equipment and doctrine have hardly changed since World War II. They rely on line of sight communications; the U.S. is satellite based. They need to be anchored three hours before H-Hour to launch landing craft; the U.S. will launch OTH. Their landing craft requires an acceptable landing site; an LCAC can transverse 80% of the world's beaches. And this is with 1990's technology - not the OMFTS envisioned equipment of 2010 and beyond. This is not to slight our allies' capabilities, rather to illustrate the technological/doctrinal chasm that exists today.

Employing OMFTS is clearly not compatible with CAFMED. The use of OMFTS could potentially damage the unity of effort with our Coalition partners. Again, DESERT SHIELD/DESERT STORM demonstrated how Coalition unity legitimized military operations and provided invaluable access to

bases, ports and airfields. Using OMFTS may delegate our allies to fulfill a supporting role, i.e. acting as a follow on force or providing sustainment for U.S. troops ashore. That could lead to diplomatic difficulties, especially if we are assisting them in "their" war. This is not a reason to abandon the concept, but a serious point for the operational commander to consider before using it.

Perhaps the OMFTS concept could be modified to incorporate displacement craft. Our allies are dependent on displacement landing craft. LCAC do not operate from every U.S. amphibious ship and Amphibious Ready Groups will continue to deploy with displacement craft for many years to come. A doctrine that incorporates LCAC and displacement craft would not only grant opportunities to our allies, but also fully use all of our assets.

OMFTS AND JOINT OPERATIONS

Any U.S. military action in the future will probably be Joint. Although Joint operations are taught and exercised, they are not seamless evolutions with all players acting in one accord. That is a goal, but it is doubtful we will ever reach that level of integration. One of the most challenging areas of Joint integration is in air coordination, with the Joint Force Air Component Commander (JFACC).

Our military has become accustomed to and reasonably proficient in Joint operations with a JFACC. The process is complex, requiring a 48-hour lead time to collect, coordinate, and publish the Air Tasking Order. Air units use this order to plan their missions for the following day. Last

minute changes are possible, but they could reduce mission readiness. The system works best when all participants are planning 48-72 hours in advance.

OMFTS will generally be a Naval service evolution, and will require input into and from the JFACC and other supporting commanders. One goal of OMFTS is to exploit vulnerabilities and opportunities as they arise and, "be able to act so quickly that the enemy will not be able to react effectively until it is too late."[14] This is an effective principle of war to control the tempo and momentum, but in practice it may complicate the supporting requirements to an untenable point. How can support be provided if the requirements and objectives of the supported commander change at the last minute? Amphibious operations are well scripted to coordinate and synchronize all events. The more comprehensive the script, the more difficult (and dangerous) it is to make last minute changes. The problem is compounded when operating in the enlarged battlespace and at the greater ranges envisioned by OMFTS.

Again, this is not a reason to cast off the OMFTS concept. But any new doctrine that will further complicate Joint integration must be carefully thought through.

FORCE PROTECTION

A Critical Vulnerability?

For the Naval commander, operating his ships OTH provides a factor of safety and comfort not available when in sight of a hostile shore. As coastal defenses become more sophisticated and plentiful, it makes sense to

keep the ships at a safer distance. Although there is heavy reliance on the ships today, in OMFTS the amphibious ships would be operational centers of gravity throughout the operation since the Marines would never transition ashore.

The assault vehicles (LCAC and AAAV), however, are a weakness, perhaps even a critical vulnerability. The unarmored LCAC is already recognized as susceptible, and is envisioned as going ashore after enemy defenses have been neutralized.[15] The AAAV is well protected, but much can happen in a 25-40 mile transit at sea. Both vehicles would work well in the ideal OMFTS situation - undefended point of entry, unalerted enemy, and no early warning sensors. It is plausible, though, that we would still have to approach a beach with some defenses. Coastal radars and gun emplacements can be neutralized with air assets, although at the cost of surprise. More dangerous are the armed coastal patrol boats that are so common throughout the world. They are difficult to hit from the sea and air. Both the AAAV and patrol boats would be difficult to see on radars while OTH, which reduces the commanders ability to "see" the battlespace and control events. Armed coastal patrol boats could easily disrupt and possibly cause havoc on AAAVs during an OTH transit.

One proposed solution to this dilemma is the Amphibious Assault Direction System (AN/KSQ-1).[16] The system interfaces with the Marine Corps' position location reporting system (PLRS) and the Navy's NAV STAR system to provide near real time locating data on units equipped with the PLRS monitor. Unfortunately, the system was designed for land use and is UHF based, therefore limited to line of sight. To become OTH capable, an airborne relay, a UH-1 helicopter, is required. Once battlespace dominance

is achieved, an airborne relay should not be a problem. If not, however, a lone helicopter on the horizon might further complicate force protection issues or ruin the element of surprise.

The Mine Threat

Similarly, the mine threat also poses a significant barrier to the operational commander. The Gulf War mine incidents with the *USS Princeton* and the *USS Tripoli* highlighted the effectiveness of this cheap, easy-to-use weapon. Since then, the mine threat has proliferated. A recent study showed that since 1991 there has been a 40% increase in the number of countries producing mines and a 50% increase in the number of countries that export mines.[17]

Obviously, mine avoidance is the best alternative. On the other hand, geography may limit the number of littoral penetration points available, and they could be defensively mined. Supposedly, LCAC can safely avoid mines as they skim over the surface of the water. On the contrary, AAAVs are displacement craft, fully vulnerable to every type of mine. How much, if any, attrition factor is built into the operational commander's plan? Could he justify sending troops through mined waters in our limited number of high cost of assets?

Other options to counter the mine threat vary from new equipment to doctrinal changes. One is the Organic Offboard Mine Reconnaissance concept. In it, surface ships and submarines, arriving ahead of the expeditionary forces, would use surveillance and intelligence data to determine the size and extent of the mine threat and the anticipated safe operating areas.[18] The operational commander would then decide to accept

the risk or continue searching for safer areas. Another innovation in equipment is the MCAC, or Multi-mission LCAC. A group of line charges is secured to and subsequently launched from the deck of an LCAC. The exploding line charges would create a breech in the minefield for assault craft. Further examples include finding and exploiting minefield gaps intentionally left or caused by poor minefield maintenance.[19] Another is to use deception to trick an enemy into laying a minefield too early or in the wrong place. Finally, another method would be to target mine stockpiles for destruction early in an operation. This option would be restricted by political policies and the commencement of hostilities, as in DESERT SHIELD/DESERT STORM, for example.

Anti-mine operations, despite the platform, whether conducting surveillance or clearing, requires a vessel to be under the horizon. This would be a clear and easy indicator of impending operations. Protection of the MCM forces is another vexing problem for the operational commander, but that is beyond the scope of this paper. Clearly, mines remain an obstacle to achieving battlespace dominance with no effective solution in sight.

If not countered, mines will reduce or remove the surface option to a commander employing the OMFTS concept. This might lead to some non-traditional solutions, like employing two amphibious big decks (LH ships), for example. By doubling the amount of aircraft, the operation could be conducted completely by air, avoiding the mine threat altogether. In addition, the ships could remain OTH and never have a reason to close the beach. However, if the second big deck is not already in theater, there would be a significant delay while it deploys.

SUPPORT REQUIREMENTS

Amphibious operations, compared to some other forms of modern warfare, are relatively low tech. Yet its complexity in planning and execution is unmatched as literally dozens of events are synchronized to the minute. Over time, lengthy checklists have been developed to ensure all details are considered. Proper planning for even a small amphibious assault (MEU sized) requires several days work from both the Navy and Marine staffs and their support elements.

A primary consideration in formulating landing plans is the Amphibious Objective Area (AOA). The details of an AOA, such as the size, height and time of activation, are discussed at great length up and down the chain of command. This is important because it drives organization tables and missions of various units during an operation. The AOA is commonly misunderstood; it is simply a deconfliction device. During an assault, for example, numerous helicopters transit from the ship to objective areas. Air controllers within the AOA ensure safety of flight for these aircraft and conduct check in/out procedures for other aircraft ingressing/egressing the AOA. The Commander, Amphibious Task Force (CATF) is responsible for the AOA and the safety of all vessels and aircraft within the AOA. This is an enormous task that requires the complete attention of several key members of his staff.

AOA's may or may not survive into the future. But the practice of CATF controlling a portion of "space" should. Numerous risks are introduced by not having close control of such a high traffic area. This is another shortcoming with OMFTS. The operational commander's battlespace

is considerably enlarged, both at sea and over land. This will greatly increase the amount of information flowing into already tightly compressed decision cycles. Furthermore, the CATF staff is already undermanned. Increasing their area of responsibility, without additional manning, would stress their capabilities. New technology may be able to gather and display this information, but the limiting factor will be the operational artist who must understand and act upon it.

OMFTS requires the artist to be flexible and change the scheme based on the latest intelligence. This is easy in theory, but difficult in practice. Lieutenant General Cushman correctly observes that "such flexibility has not been a traditional characteristic of the amphibious operation, whose hallmarks have been detailed planning and by-the-book execution."[20] Ideally, OMFTS would give the commander the ability to change his scheme after the forces have launched. How could the operational commander convey his operational idea to his tactical commanders if he waits to the last minute to choose one? This would require perfect communications and synchronization between everyone from the operational commander to the squad leader. Again, new technology may provide this capability, but the limiting factor is the ability of the individual on the "pointy end of the spear." Just because technology will allow us to do something, does not automatically make it viable in the battlefield.

Another planning and support requirement is supporting fires. A contract was awarded last year for the development of the Extended Range Guided Munitions (ERGM). Expected to be completed by 2001, the ERGM will provide the current 5-inch gun with significantly extended ranges and precision accuracy.[21] This will provide a much needed capability to the

landing forces. However, this is another entity for the operational commander's "perfect communications" net. If not done flawlessly, the results of altering the extended range naval gunfire at the last minute could be disastrous.

Finally are the issues of sea-based logistics and limited lift assets. The OMFTS concept foresees lighter forces with smaller logistics tails.[22] Avoiding the large supply dumps is desirable as the forces try to reduce their footprint ashore. On the other hand, the service the supply dumps provide will also be sacrificed: efficient distribution. With supplies ashore, requests are quickly processed and sent to the units in the field. With sea-based logistics, the request must be transmitted to the ship, the supplies located and loaded, transferred ashore, and then sent to the units in the field. These extra layers may cause unacceptable delays. And today's amphibious ships are not designed or loaded to selectively offload material quickly. During an engagement, the speed of the response could determine the victor. Material would be transferred ashore via air or surface means. Providing on-call supply support would require either the flight deck or well deck to conduct 24-hour operations. Amphibious ships are not manned to conduct 24-hour operations and attempting to do so could create unsafe operating conditions. Sea-based logistics is best suited to small engagements of one to two days duration. Anything larger would stress the capability of the ship and not meet the needs of the Marine in the field.

CONCLUSION

OMFTS is a concept for amphibious operations in the 21st century. There is no question that a new approach and mentality toward littoral warfare is needed. As happened with Capt Ellis' amphibious assault concept 70 years ago, it is useful to start the discussions on doctrine and tactics today, so an effective, useable procedure is in place tomorrow.

OMFTS will most often be employed in a Joint, and quite often in a Coalition environment. It is paramount that new doctrine is compatible in these situations. Already, U.S. amphibious forces operate a level above any of our allies. Future development of the OMFTS concept should focus on procedures to integrate displacement craft and LCAC. This will ensure maximum U.S. unity of effort and lead to optimum use of all resources.

The potential critical vulnerability of unprotected assault craft in transit is of primary concern. While possessing OTH capability is desirable, it also introduces new challenges not yet considered. Even a moderately competent adversary could exploit this weakness and win a major victory. The mine threat will continue to be a difficult problem to counter. This, along with last minute mission changes and sea-based logistics, represents areas that could defeat OMFTS.

A final consideration is that OMFTS is based on future acquisitions. We cannot further develop the OMFTS concept until the true operating characteristics of the MV-22 and the AAAV are known. And the truth will only be known when they are in the hands of the operators in the fleet. How well does it operate from a ship? How reliable is it? How fast can they be loaded and launched? Is it compatible with other aircraft on the

flight deck? These and a host of other questions will determine if the concept will transition to doctrine. Only time will tell if OMFTS will enjoy the same success as the amphibious assault.

A final question is when will the fleet fully transition to the MV-22 and AAAV? Assuming there are no production delays, the high cost of these craft will cause them to enter the fleet slowly. Once they are in place, then the OMFTS concept can be tested and evaluated. In short, it could easily be 20-25 years before OMFTS becomes a reality. Perhaps it would be more profitable to focus on how to project Naval power ashore until then.

NOTES

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6. U.S. Marine Corps, Operational Maneuver From the Sea, 5.

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10. J. B. LaPlante, "It's Time for the 'Gators," U.S. Naval Institute Proceedings, May 1993, 49-52.

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13. Stephen P. Curtis, "Operational Maneuver From the Sea in Alliances and Coalitions - The Problem of Interaction in a Hostile Environment," Unpublished Research Paper, U.S. Naval War College, Newport RI: 1996.

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15. Glenn W. Goodman, Jr., "A Seamless Assault," Armed Forces Journal International, May 1996.

16. Albert A. DeSantis and Teresa Floore, "AN/KSQ-1 Enhances C^3 in Operational Maneuver From the Sea," Marine Corps Gazette, January 1996, 32-34. All subsequent details on the AN/KSQ-1 system are from this article.

17. "Organic Offboard Mine Reconnaissance Concept of Operations," <http://sea02www.navsea.navy.mil/webdata/pmo403/org_cnps.htm>

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22. U.S. Marine Corps, Operational Maneuver From the Sea, 6.

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